

What is claimed is:

1. A slot antenna mountable on the Hercules aircraft dorsal fin comprising:
 - a) a lower plate;
 - b) an upper plate adjacent to the lower plate;
 - c) an antenna element; and
 - d) a tuner operatively connected to the antenna element;wherein, the tuner transmits radio frequency signals to the antenna element, and wherein the antenna element and the lower plate produce a capacitor effect.
2. The slot antenna of claim 1, wherein the antenna element is integrated within the upper plate.
3. The slot antenna of claim 2, wherein the antenna element having a center prong, a first lower prong and a second lower prong, wherein the three prongs are substantially separated by a fiberglass plate.
4. The slot antenna of claim 3, wherein the center prong having a width dimension 'W1', wherein the width dimension 'W1' is between about 10 inches and about 6 inches.

5. The slot antenna of claim 4, wherein the width dimension 'W1' of the center prong is about 8.0 inches.
6. The slot antenna of claim 5, wherein first lower prong and the second lower prong having a width dimension 'W2', wherein the width dimension 'W2' is between about 4 inches and about 2 inches.
7. The slot antenna of claim 6, wherein the width dimension 'W2' of the first lower prong and the second lower prong is about 3.0 inches.
8. The slot antenna of claim 7, wherein the center prong having a length dimension 'L1', wherein the length dimension 'L1' is between about 120 inches and about 110 inches.
9. The slot antenna of claim 8, wherein the length dimension 'L1' of the center prong is about 116.5 inches.
10. The slot antenna of claim 9, wherein the center prong having an apex, wherein the apex and the lower plate are

separated by a distance 'D1', wherein 'D1' is about 7.5 inches.

11. The slot antenna of claim 10, wherein the first lower prong and the second lower prong having a length dimension 'L2', wherein the length dimension 'L2' is about 134.5 inches.

12. The slot antenna of claim 11, wherein the lower plate having a length 'L3', wherein the length 'L3' is about 134.5 inches.

13. The slot antenna of claim 12, further having a Radio Frequency feed line with a length "L4", wherein the feed line operatively connects the tuners to the antenna element, wherein the length "L4" is about 5.5 inches.

14. The slot antenna of claim 13, wherein the aircraft is one of the Lockheed Hercules Models 'A-H'.

15. The slot antenna of claim 14, wherein the tuners are mounted within the interior of the aircraft fuselage.

16. The slot antenna of claim 15, further comprising a tandem rack, wherein there are a plurality of tuners, wherein the plurality of tuners are mounted in the tandem rack, wherein the plurality of tuners are mounted front to back of each other, and wherein the tuners are both connected to the same feed line.

17. A slot antenna mountable on the Hercules aircraft dorsal fin and adjacent to the aircraft empennage comprising:

- a) a lower plate;
- b) an antenna element having a front-end and a back-end;
- and
- c) a tuner operatively connected to the front-end of the antenna element;

wherein the tuner transmits radio frequency signals to the antenna element, wherein the aircraft having an empennage, wherein the back-end being adjacent to and connectedly grounded to the empennage, wherein the antenna element and the lower plate are separated by air, thereby producing a capacitor effect, and whereby the radio frequency signals will tend to radiate towards the grounded back-end of the antenna element and into the empennage area.

18. The slot antenna of claim 17, further having a Radio Frequency feed line with a length "L4", wherein the feed line operatively connects the tuners to the antenna element, wherein the length "L4" is about 5.5 inches.
19. The slot antenna of claim 18, further comprising a tandem rack, wherein there are a plurality of tuners, wherein the plurality of tuners are mounted in the tandem rack, wherein the plurality of tuners are mounted front to back of each other, and wherein the tuners are both connected to the same feed line.
20. The slot antenna of claim 19, wherein the lower plate having a length 'L3', wherein the length 'L3' is about 134.5 inches, thereby increasing the propagation distance of the radio frequency signal.